THE FOREST PEST SITUATION IN MICHIGAN - - 1969

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Michigan's weather varied considerably from month to month during 1969 with cool and wet conditions prevailing during June, July was warm and wet, and August hot and dry. In general, growing conditions were good during early summer, but there was an almost complete lack of rain during most of August. Frosts during early June severely affected oak and beech trees, with a lesser effect on other species. In some parts of the northern Lower Peninsula, the oak leaves were killed twice by frosts.

Heavy hail storms in early July stripped the tree foliage in some localities in eastern Iron County and Dickinson County. An ice storm during the winter was destructive to trees in Lapeer County growing in the open. Also, in Lapeer, Jackson and Washtenaw counties rising ground water levels in swampy areas resulted in the death of some lowland hardwood trees. Nine inches of rain were reported in Menominee County during June.

Thus, from the above, it might be suggested that the weather during 1969 in Michigan was unusual, but every year seems to have unusual weather, with various combinations of frost, rainfall, and drought. In general, however, Michigan seems to be in a wet cycle and ground water levels and lakes are considerably higher than a few years ago.

Last year, during 1968, a population explosion of the forest tent caterpillar occurred with over 300,000 acres of hardwoods defoliated in Antrim, Charlevoix and Kalkaska counties, and lesser amounts in Grand Traverse and Leelanau counties. Cocoon surveys during 1968 revealed that parasitism was not high enough level to stop the outbreak. However, egg mass surveys during the winter of 1968-69 indicated an insufficient number of egg masses to result in severe defoliation. Caterpillars were common in 1969 in the areas defoliated the previous year, but only minor defoliation occurred. The cool, wet spring, and the late frosts may have been a primary cause of the drastic reduction in the caterpillar infestation. Reports from the Betsie River, Fife Lake and Jordan River forests indicate that the caterpillars could be easily found, but defoliation was scarcely noticeable.

Although at a lower intensity than in 1968, the leaf roller on oak continued to defoliate oak in northeastern Lower Michigan, in the general area north of Clare and east of U.S. 27. This insect was formerly called the fruit leaf roller, Archips argyrospilus, but now has been identified as Archips semiferanus. It is also known as the "greeny worm" by residents and fishermen in the infested area. In Ogemaw County the more heavily infested areas were in the southern part of the count, with less in the northern section where severe frost damaged the oak. The general population was down from last year in Oscoda County, but moderate defoliation was reported. Some oak stands south of Atlanta in Montmorency County were almost complet defoliated, while elsewhere in the county moderate to low defoliation took place. In Crawford County, the only area of heavy defoliation was in the southern part near Higgins Lake. U.S. Forest Service aerial surveys disclosed moderate to severe defoliation generally through the oak type in Alcona and Iosco counties.

As a result of the leaf roller defoliation for two to four years, and the one or two late frosts during June, the trees were weakened and mortality occurred. This became apparent suddenly in August in some areas with trees suddenly dying that looked healthy, with a good leaf crown. Within a few days, the leaves turned brown, progressing from the top of the tree downward. The extent of the oak mortality in not known are present, but many acres are involved in Roscommon County south of Houghton Lake, in Oscoda County north of Mio, and in Alcona and northern Iosco counties.

Oak mortality is also common in Lake County north of Baldwin on the poorer sites. This has been occurring for several years, and is in an area that has not been defoliated by the leaf roller. Repeated checks for oak wilt have not revealed the presence of this disease.

As usual, the jack pine budworm defoliated jack pine in Michigan. A year seldom passes without a budworm infestation someplace in Michigan. At the present time, although the larvae can be commonly found in Lower Michigan, no moderate or severe defoliation was reported. In the Upper Peninsula outbreaks occurred in central Marquette County on the Michigamme and Escanaba River State Forests, in Iron County on the Panola Plains area, and in east-central Upper Michigan on the Manistique River and Lake Superior State Forests. In general, trees and stands that are severly defoliated one year are seldom heavily attacked the following year. Thus in years of adequate rainfall and otherwise good growing conditions, the pine mortality is relatively low.

On the Escanaba River State Forest in Marquette County the infestation spread outward and where the infestation was new in 1969, the defoliation was severe. In the central portion of the infestation, and those portions where the infestation has occurred during the last few years, the trees are starting to recover, although there are a lot of dead-topped trees and some dead trees. Farther north, on the Michigamme State Forest, widespread defoliation occured in the townships south fo the Ishpeming, and negligible feeding where the defoliation was heavy in 1967 and 1968.

The infestation continued to spread at a rapid rate on the Manistique River State Forest with complete coverage expected by next year. The Danaher Plains area of the Tahquamenon River State Forest showed little evidence of budworm defoliation in the stands that were defoliated in 1968 as the trees did not produce any staminate flowers. On the Lake Superior State Forest, the budworm was extremely common throughout the jack pine area and some found on seedlings planted in 1969. Some tree mortality has been noticed along County Road 412, but in most areas, complete defoliation of the new foliage did not occur, and generally the damage ran from 1/3 to 2/3 defoliation. Although large number of budworms were present in parts of the Mackinac State Fores, they seemed to feed very lightly and the severe damage expected did not materialize. Trees defoliated in 1968 looked good in 1969. Light to moderate defoliation was evident in most of the jack pine type on the Grand Sable State Forest and in some places, the red pine has not recovered well from the 1968 defoliation. The Garden School Forest in the Bay de Noc State Forest suffered moderate to heavy damage.

The previous outbreak area on the budworm on the Baraga Plains during 1966 and 1967 remained at a low level in 1969 although many trees with dead tops are evidence of the defoliation coupled with drought conditions at the time of the outbreak. For the first time in recent years, in southern Lower Michigan heavy defoliation of jack pine was reported in Ingham County in the Dansville Game Area.

The U.S. Forest Service reported light defoliation west of Brimley in Chippewa County, in townships 44 and 45 north, and 5 and 6 west in Chippewa County, and also in western Alger and eastern Delta counties. The infestation in these areas peaked in 1967 and has been declining since. In western Upper Michigan, defoliation has declined considerably from last year, with only light defoliation in areas that had moderate defoliation in 1968. The exception was 2,000 acres of moderate defoliation on the Wisconsin border.

A slight increase in the reports of red-headed pine sawfly infestations was noted in 1969, indicating a possible general build-up. An expected serious defoliation did not materialize in a 15 foot red pine plantation in Mackinac County when over 90 percent of the eggs failed to hatch. As a result, plans to aerially spray the plantation were cancelled. Elsewhere, infested plantations were found in Grand Traverse, Emmet, Cheboygan and Alger counties.

Infested plantations on National Forest land were reported in Mackinac, Ontonagon, Houghton, Gogebic, and Wexford counties.

The Dutch elm disease continues its devastation of elm trees throughout all of Lower Michigan, in many areas virtually eliminating elm from the forest stands. Reports from Alpena County state that this was the worst year yet, with elm dying rapidly on low elm flat sites, and with about 10% of the elm in the county killed this year.

In the Upper Peninsula, newly infected areas were reported and a wider spread of the disease observed in the older ones. In the Escanaba and Carney areas the number of diseased elms was much greater than in the past and the local people became concerned to a greater extent. A new infection was found in Norway in Dickinson County and in the Manistique Lakes area, in Mackinac County. In Schoolcraft County it is spreading in the vicinity of Cooks. With these areas, plus the infection centers at Sault Ste. Marie and Germfask, the future of elm in the Upper Peninsula looks rather dim.

Mortality of your red and jack pine plantations due to Scleroderris pine canker continues at a slow but steady rate. On the Grand Sable State Forest it is beginning to show up in 1962 plantings near Stanley Lake, and also in 1961 plantings on the Danaher Plains. These plantings have less than 5 percent infection at present. On the Mackinac State Forest, the canker is present in all young plantations but only on a few trees. Plantations on dry sandy soils on the Lake Superior State Forest are being infected as are those on the Tahquamenon River State Forest south of Newberry and on the Danaher Plains.

Several hardwood defoliators were present in large numbers during 1969 resulting in considerable attention from the public, but fortunately not too seriously affecting the trees. The cherry scallop shell moth was again numerous in Luce and Mackinac counties with adults attracting a lot of attention. The brown cherry trees resulting from the defoliation prompted numerous calls for information from the public.

Cankerworms in the southern part of Lower Michigan were at lower numbers than in previous years with no large infestations reported. Farther north, small areas and individual trees were defoliated in northern Lower Michigan, and in the Upper Peninsula, Shakey Lakes Park in Menominee County was again defoliated, but to a lesser degree than in 1968.

Last year the birch skeletonizer became apparent in northern Lower Michigan indicating a build-up in populations, the first since the early 1950's. This trend continued during 1969 with noticeable browning of the birch occurring in Sanilac, Tuscola, Emmet, Grand Traverse, Wexford, and Cheboygan counties. While the browning of the leaves caused by the caterpillars eating the lower surface is quite noticeable, the lateness in the season of the feeding reduces the effect on the trees and serious harm is not expected.

Red-humped maple worms were back again on the Mackinac and Tahquamenon River State Forests with a light scattered defoliation throughout the forest and a few heavily infested stands, totalling about 800 acres on the Mackinac Forest, and 1,000 on the Tahquamenon River Forest. Complete defoliation of maple in 5 to 10 acres patches took place in Emmet County.

A similar caterpillar, the red-humped oakworm, stripped oaks in Muskegon County north and east of the Muskegon State Park, the same area infested in the late 1950's. It is expected that these caterpillars will defoliate oaks for a year or two and then disappear.

In Benzie County, 500 to 1,000 acres of hardwoods were defoliated by the saddled prominent in a strip from Arcadia north to Crystal Lake.

Other hardwood defoliators included oak leaf miners in the Allegan County that were somewhat less than last year, fall webworms that were common throughout southern Lower Michigan, and birch leaf miners found commonly on white birch. No walkingsticks were reported in Ogemaw County, the area of widespread outbreaks in the past.

On conifers, the jack pine sawfly declined in Luce County to much lower numbers than in recent years. Elsewhere throughout the northern part of the state, colonies could be easily found in many jack pine plantations but little damage resulted.

The European pine sawfly continues at low levels in Scotch pine plantations in Lower Michigan, being most abundant in the southern portion of the state.

The up and down larch sawfly continued its population fluctuations with increase noted on the Sturgeon River State Forest, reductions on the Mackinac and about the same on the Grand Sable State Forest. Populations vary greatly from stand to stand, as repeated defoliation reduce the shoot length making them undersirable for egg laying. Thus stands are usually subjected to fluctuating populations over a period of years, enhancing the chances of survival of the trees. In lower Michigan heavy defoliation was reported on the Hardwood and Thunder Bay River state forests.

Spruce budworm defoliation of balsam was reported on the Hardwood and Thunder Bay River state forests. This insects has not been a problem in Michigan since the outbreak in Keweenaw County that ended in 1953.

Severe damage due to the Saratoga spittlebug was found in a 6 foot red pine plantation in Alpena County that had 30 percent mortality. Elsewhere in the northern part of the state where sweetfern was abundant in pine plantations, varying degrees of damage was found. The U.S. Forest Service aerially sprayed a 90 acres red pine plantation with malathion to control an outbreak of this pest. The spraying resulted in 95 percent control.

In a private plantation in Mackinac County, lodgepole pine was killed by attacks of the pine root collar weevil.

White pine weevils continued to be a problem in white, Scotch and jack pine plantations throughout the state with the greatest damage being in Lower Michigan. This pest does not seem to fluctuate greatly from year to year, but is ever-present and contributes to the poor form of jack and white pines.

The cool wet spring contributed to the favorable conditions for anthracnose of various species of trees with sycamore being particularly severly infected in southern Lower Michigan.